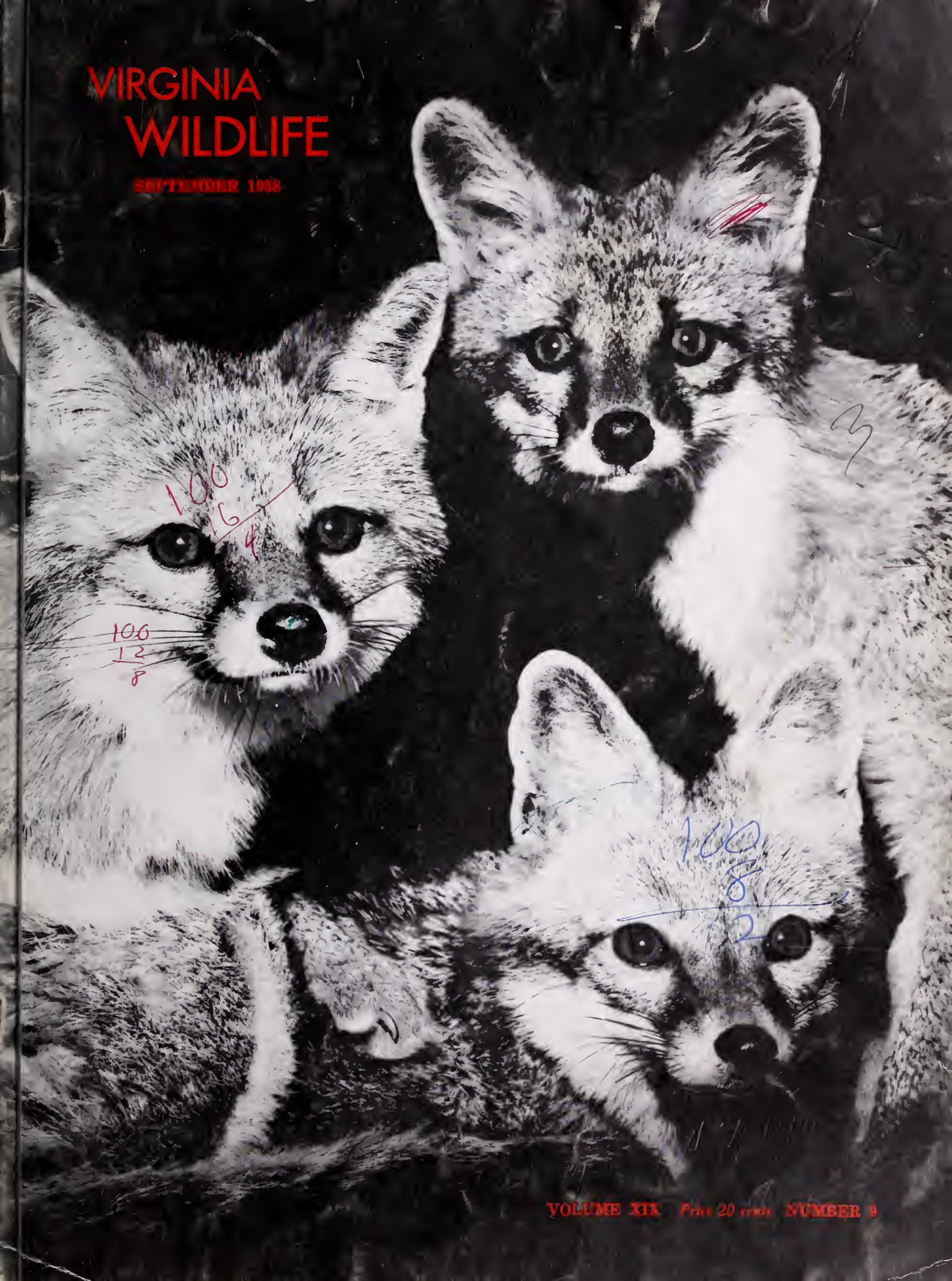


VIRGINIA WILDLIFE

SEPTEMBER 1958



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Ebb Tide



Photo by Allan D. Cruickshank from National Audubon Society

Sanderlings, friendly bird company of the surf fishermen, await the changing tide — and food.

VIRGINIA WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia
A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting, Fishing and Outdoor Recreation in Virginia

COMMONWEALTH OF VIRGINIA



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Cover

Three young members of Virginia's gray fox population, subject of Nelson Swink's article, "The Gray Ghost of Southern Woodlands," on page 10, were caught in this alert pose by Commission photographer Leon G. Kesteloo.

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TV & Motion Picture Productions, Inc. Photo

Widespread and rapidly increasing use of powerful new "bugbanes" poses a serious threat to wildlife. Applying insecticide from the air is a difficult technique. Inexperienced pilots have sprayed the same areas twice and destroyed livestock and wildlife with the overdose of poison.

Pesticides vs. Wildlife

By M. RUPERT CUTLER
Associate Editor, Virginia Wildlife

ALARMED by the widespread poisoning of wildlife by powerful new pesticides, organized sportsmen have helped win Congressional approval of a bill (Senate 2447) authorizing the U. S. Fish and Wildlife Service to study in detail the effects of insecticides, herbicides and fungicides upon fish, birds and mammals.

If adequately financed, this long-term study should discover proper methods, times, dosages and formulations that might be applied in insect and plant control operations without harmful and lasting effects on fish and wildlife populations.

Certainly such research is long overdue and badly needed. As Ross L. Leffler, Assistant Secretary of the Interior, has said, "Constantly stronger sprays are being used all the time, and we just haven't had the money to do any intensive research into their effects."

Wildlife Has Been Sacrificed

Just as it seems that people must be killed at a dangerous intersection before a traffic light is installed, untold numbers of wild birds, mammals and fish had to be destroyed by users of pesticides to awaken conservationists to the need for more research, coordination and education in the field of chemical pest controls.

The well-publicized fire ant eradication "crash program" begun in Alabama this spring helped point up the need. U. S. Department of Agriculture personnel were given \$2.4 million of Federal funds and \$1.5 million of local and state monies to initiate a 10-year program to distribute the superinsecticides dieldrin and heptachlor over 27 million acres in nine southern states. Both poisons were known to be hazardous to fish, bees, game and domestic animals at crop insect levels of application.

Alabama conservation director W. H. "Bill" Drinkard

raised the roof when he saw the initial results: dead rabbits, raccoons, 'possums, quail, rats and mice, birds of prey and song birds littered the hedgerows in areas where the poison had been scattered.

Fish, Game Economic Value Overlooked

Federal and state agriculture agencies had duly warned the people to cover the leafy vegetables in their gardens, cover their fish ponds, keep their laundry off the lines, keep their cattle off treated pastures for from 15 to 30 days, cover or remove their beehives, and keep their children and small pets out of yards and away from puddles for a few days after the fire ant treatment.

But they hadn't come up with a way to protect the wildlife, and the fish and game resources of Alabama are said to have an estimated capital value exceeding \$1,220,000,000. Hunting and fishing are worth at least \$48 million in the state each year, says the Sport Fishing Institute, considerably more, it adds, than the annual value of hogs, dairy products, eggs, forest products, peanuts or cotton seed.

Not only was much of the wildlife in the initial fire ant treatment area killed directly—bird numbers were immediately reduced as much as 75 to 85 percent—but the animals that survived faced indirect poisoning, sterility or starvation. Roy J. Barker of the Illinois Natural History Survey has found that moderate applications of DDT can be concentrated by earthworms to produce a lethal effect nearly one year later on the robins which ate them. Charles L. Broley has reported in *Audubon Magazine* that the bald eagle population in Florida is declining. He believes sterility, resulting from eating fish killed by DDT and other insecticides, is the cause. And the Fish and Wildlife Service reports that "chemi-

cals presently being used to control the fire ants in the southeastern states are known to be having an adverse effect on the woodcock food supply."

North Carolina is battling the rapidly spreading fire ant now, and the Virginia Division of Plant Industry says it's ready to dump dieldrin on the small red stinging insects when they show up in the Old Dominion. Quail here will "catch it," either way, then; they will either be poisoned or a good percentage of their eggs and young will be destroyed by the ants.

An Old Problem Has Become Serious

The pesticide problem isn't new. Arsenical sprays applied to flowering fruit trees were killing bees in the 1870's. Delta Air Lines began operations in 1924 as "the world's first commercial crop-dusting company." But development of the most powerful agricultural chemicals has taken place during the last 12 years. Now well over 6,000 commercial preparations are on the market, and 400 to 500 million dollars worth are sold in this country each year.

Practically every commercial agricultural crop is now treated with one or more of these poisons. Airplanes as large as twin-engined "flying boxcars," helicopters, mist machines on trucks and back pumps are used to apply them. Wild forests as well as intensively cultivated croplands have been drenched with DDT and concoctions many times more potent in the name of economic necessity. Fruit flies, gypsy moths, budworms, bark beetles, mosquitoes, sandflies, and other pests have been temporarily reduced in numbers or eradicated. In some cases, salmon, trout, rabbits, upland game birds, songbirds, crustaceans and other forms of wildlife in the treated area were also reduced in numbers or eradicated.

Here in Virginia, quail, rabbits and a red fox are known to have been poisoned by endrin, a dinitro compound similar to heptachlor which is used as a broadcast spray to control mice in Shenandoah Valley apple orchards. Fish have been killed here by poison toxaphene mist which accidentally drifted over ponds, and deer kills have been attributed to overdosages of herbicides along utility rights-of-way.

Virginia's commercial apple orchards are now dosed with poison mist from 7 to 12 times between February and mid-August.

Commission Photo by Kesteloo



Intelligent Application Required

The U. S. Department of Agriculture, after testing all new pesticides, suggests what it considers safe dosages and methods of application, and these recommendations are double-checked by state technicians before the chemical is recommended by county agents in Virginia. State entomologists, county agents and others working with pesticides are outdoor people and, for the most part, conservation-minded. They must try to find compromise dosages which will reduce the farmers' losses without seriously depleting the wildlife of the area—not an easy job when the farmer considers the eradication of the plant pest most important.

Trouble oftentimes occurs where (1) an enthusiastic farmer applies twice the recommended concentration of the poison to do "twice as good a job;" (2) different operators unintentionally spray the same area for different pests within a short period of time; or (3) inexperienced pilots spray the same line twice or dump the last of their load all at once before heading for home.

Human error can never be eliminated. Some degree of coordination can be effected, however. Connecticut has proven that. Permits for aerial spraying are issued by the nutmeg state's aeronautics director, and policies and regulations concerning the application of pesticides are made by a committee consisting of the aeronautics director, the fish and game director, the agricultural experiment station director and the commissioner of health. All large-scale spraying operations are reported beforehand to the aeronautics director to eliminate most duplication and the resultant over-dosage problems.

At Stake: A \$3 Billion Industry

Farmers, orchardists and foresters often must use pesticides to stay in business, present-day competition being what it is. Conservationists will have to live with the problem. But conservationists *can* be on the alert for signs of damage to wild communities, as "a watchdog growling."

Virginia sportsmen are on their toes; the Virginia Division of the Izaak Walton League of America and the Virginia Wildlife Federation, state affiliate of the National Wildlife Federation, recently passed similar resolutions concerning the problem, the former urging the passage of the federal pesticide research bill and the latter asking the Game Commission to keep the public informed on the proper use of pesticides. Word of wildlife destruction in the wake of the fire ant eradication program in Alabama prompted both resolutions.

Uppermost in the minds of those who use pesticides should be concern for the preservation of the natural community where possible. Twenty-five million Americans, according to a 1955 U. S. Fish and Wildlife Service Survey, spend \$3 billion each year to fish and hunt. The wild animals that make this important industry possible belong to no one person or corporation; they belong to all Americans. It is up to every citizen to help see that "our wildlife legacy" is protected.

RELIEF IN DOG LAW ENFORCEMENT

SOON, thanks to an Act of the 1958 Virginia General Assembly, many of the game wardens of the Virginia Commission of Game and Inland Fisheries may find themselves working full-time on game and fish law enforcement and conservation public relations instead of spending much of their time chasing dogs.

Section 29-184.2 of Chapter 575 of the 1950 Code of Virginia now says in part: “. . . in any county, the enforcement of the dog laws may, in the discretion of the governing body thereof, be vested in a dog warden and deputy dog wardens, and upon the appointment therein of a dog warden and deputy dog wardens *the game warden shall have no jurisdiction as to the enforcement of the dog laws.*”

County boards of supervisors have been paying the Commission-employed game warden assigned to their county anywhere from nothing to \$4,200 per year to enforce the dog laws. As a result, warden salary inequalities from county to county are commonplace; game wardens are often thought of as dog-catchers; wardens rarely wear their uniform because it becomes soiled dispatching dogs; and the wardens are hampered in their public relations work because they are disliked by the owners of dogs they must destroy. Last year the total number of dogs destroyed by game wardens was 43,912.

Already, more than a dozen Virginia counties have hired dog wardens, relieving the game wardens in those counties of the responsibility of enforcing dog laws. Among these counties are Scott, Montgomery, Rockbridge, Augusta, Fauquier, Henrico, Dickenson, Northumberland, Accomack, Caroline, Norfolk, Richmond and Princess Anne.

The Virginia Commission of Game and Inland Fisheries acted favorably July 23 to adjust the salaries of those wardens whose supplemental salary for dog law enforcement has been or will be stopped as the counties to which they are assigned hire dog wardens. Without the pay adjustment, many wardens stood to lose a good percentage of their income when their counties hired dog wardens.

The following two accounts from two typical warden districts in the State illustrate how much time and effort has been spent by the game wardens of the Virginia Commission of Game and Inland Fisheries on dog law enforcement.

Dog Confinement Allows Stray Dog Clean-Up

On April 1, 1958, twelve Virginia game wardens and a Commission game technician descended on Powhatan County to enforce a new county ordinance requiring the vaccination of all dogs against rabies, the confinement of all dogs to the owner's property or under the

owner's control for 60 days beginning April 1, 1958, and providing a \$1.50 bounty for fox scalps for 60 days, beginning April 1. Designed as a rabies-prevention measure, the ordinance was also an opportunity for the Commission's law enforcement division to rid the county of stray dogs, the enemies of small and big game birds and animals alike.

For three days, supervisor I. H. Vassar, wardens J. E. Allen, J. R. Bellamy, E. J. Gorman, C. L. Heath, W. M. Haden, S. W. Breed, W. R. Redford, Jr., Nelson Phelps and McGuire Morris, Jr., conservation officers J. W. Fears and C. P. Montgomery and game technician J. B. Redd conducted a house-to-house canvass of Powhatan County, stationing one man with a mobile radio at the courthouse to check lost dog tag claims. Fifty-one arrests, for not having licenses, having improper licenses and for letting dogs run at large, were made in those three days. Over 100 stray dogs were killed during the 60-day confinement period. Owners paid one dollar each to have some 1500 dogs vaccinated by veterinarians at clinics at three convenient locations in the county.

Commonwealth Attorney W. R. Blandford of Powhatan described the stray dog clean-up as, “very smooth—I've heard a lot of compliments throughout the county on the operation.”

A similar campaign was carried out in neighboring Cumberland County, where this year the Board of Supervisors passed an ordinance requiring the confinement of all dogs from April 15 until July 15. On April 15, Supervisor Vassar, conservation officers Fears and Montgomery, wardens Allen, Morris, Haden, Breed, Heath, G. L. Cox, David Tharpe, Malcolm Booker and C. C. Spencer went into action *en masse* to make people dog tag-conscious. Over 100 arrests—63 of them in the first three days—were made in the county for not having dogs licensed. Many nuisance dogs were destroyed, and the sale of dog tags ran \$400 over the previous year's total.

County officials noted that, although there had been some opposition to tying up dogs and some feeling that the confinement period had been longer than necessary, residents were impressed by the operation and convinced that it had helped eliminate nuisance dogs, reduce sheep damage claims and increase the supply of small game. The county had passed a similar ordinance in 1948, they recalled, but the single county game warden had been unable to effectively enforce it by himself.

Buckingham County requires that all dogs be confined from May 1 to August 30. In order for owners to purchase dog licenses in Powhatan and Buckingham Counties, it is necessary that they have their dogs vaccinated against rabies every three years. The cities of Petersburg, Emporia and Hopewell have dog confine-

ment laws, and drives have been made recently to eliminate stray dogs in these cities.

The adoption of these ordinances has been due, in large measure, to the efforts of F. Nelson Swink, state mammal control supervisor, to set up a north-south "line of defense" against rabies to keep the disease from spreading eastward across Virginia. The splendid cooperation of the residents of counties which adopted confinement ordinances have made the program a success.

These incidents, however, are only brief examples of the amount of time game wardens spend on dog work—valuable time taken away from game and fish law enforcement work.

A Supervisor's Annual Report

R. S. Purks, supervisor of the Commission's George Washington law enforcement district which includes the counties of Caroline, Culpeper, Essex, Fairfax, Fauquier, Gloucester and Mathews, Hanover, King George, King and Queen, King William, Lancaster, Loudoun, Louisa, Middlesex, Northumberland, Prince William, Richmond, Spotsylvania, Stafford and Westmoreland, painted an easily understood picture of his wardens' activities, including their dog work, in an annual report given at the Field Force Short Course at Blacksburg July 7-9. Said Purks:

"My job is the supervision of 21 regular game wardens and two conservation officers in 22 counties and two cities, a land area of 6,797 square miles with approxi-

Game wardens have had to spend much of their time on dog law enforcement work. Here, the late E. J. Gorman, Chesterfield County warden, checks an owner's dog license.

Commission Photo by Kesteloo



mately 710 miles of tidal rivers and streams. Commission equipment used includes 14 boats, 17 motors, 12 trailers, 15 mobile radios and 6 walkie-talkies.

"Approximately 315,000 dollars-worth of hunting and fishing licenses and 118,099.25 dollars-worth of dog licenses were sold in my district during the year ending June 20, 1958.

"The 23 wardens under my supervision worked a total of 57,372 hours and travelled 668,779 miles during the year. They made 1,583 arrests, of which 256 were for fish law violations, 435 were for game law violations and 892 were for dog law violations. They spent 39,988 hours on game and fish law enforcement, 10,601 hours on dog law enforcement, 4,007 hours on educational work and 2,776 hours on activities such as appearing in court and repairing equipment.

"Our main enforcement problem was apprehending persons hunting or fishing with improper licenses. A number of persons were convicted in court as a result of our screening approximately 5,000 license applications to detect false addresses.

"Dog work included killing 4,169 unlicensed and unclaimed dogs, helping with a clinic for the vaccination of dogs, and helping with trapping demonstrations in schools and in the counties as a rabies control measure.

"The wardens and conservation officers delivered 14,813 pounds of wildlife food patch seed to sportsmen's groups and farmers and supervised the planting of many food patches. They showed films at schools and sportsmen's meetings, set up and manned wildlife exhibits at three county fairs which attracted approximately 75,000 people, sold a number of fishlife and birdlife books, distributed literature on wildlife habits and sold 2,620 subscriptions to the Commission's magazine. They promoted the Annual Conservation Essay Contest in the schools and taught firearms safety to scouts and other youth groups.

"They worked with fisheries technicians on the release of 24 loads of bass, bream and crappie, on the draining and removal of fish from lakes and ponds and on fish pond management. They also helped conduct creel censuses on Commission-controlled lakes.

"They trapped and removed beaver where they were flooding roads and destroying timber, and issued 150 beaver trapping permits and put seals on 180 pelts taken during the open season. They worked with technicians on deer and rabbit damage complaints, on shooting preserves, on food patch planting and on the release of quail and turkeys in selected areas. During the 1957-58 hunting season, 4,052 deer were tagged in the district, an increase of 1,490 deer over the 1956-57 season tagging total.

"The wardens also worked with personnel of the State Water Resources Board in the locating of artesian wells, and with the Water Control Board, taking samples of water from rivers and streams suspected of being polluted and delivering these samples to Richmond.

"We are looking forward to accomplishing more for conservation in the years to come," concluded Supervisor Purks.



Photo by Rex Gary Schmidt

Preparation for wildlife can include establishment of hedgerows for food and cover. A furrow is being plowed for planting multiflora rose.

Prepare NOW for Wildlife

By JOHN B. REDD, *District Game Biologist*

OF the many limiting factors which have a tendency to reduce wildlife populations, food and cover are the only ones over which man can exercise any degree of control. Various techniques have been developed through experimentation to help provide adequate food and cover for wildlife during the winter months when the supply is normally short. Emphasis will be placed here on developments designed to increase rabbit populations. In most cases, these same techniques can be used for other species with minor changes.

To make conditions more suitable for rabbits, man manipulates food and cover conditions so that preferred foods and high-quality cover are well distributed throughout the area at all seasons of the year. This same principle applies to almost any game species for which you may want to improve conditions.

Few game animals are found on intensively cultivated farms devoted to crop production or dairy cattle where little food or cover is left for wildlife. On the other hand, farms not so intensively cultivated, characterized by overgrown fence rows, waste areas of briars or brush and adequate amounts of food, produce a large amount of game. Game is just another crop of the land. In the same way as a farmer seeks ways to increase the yields of his crops, the hunter can find ways to produce more game from his hunting areas.

Techniques for providing cover include:

1. Proper farm woodland management, where livestock is fenced out of timber-producing areas in order that a brushy undergrowth may become established.
2. Plantings of cover-producing conifers and shrubs along fence rows and on odd areas in fields.
3. Where necessary the cutting of trees to allow the growth of more desirable vegetation such as food-producing shrubs and vines.
4. On areas used primarily for dog training or field trials, edge-cutting of the woodlands to provide cover and food during the winter months.
5. Planting of conifers, shrubs and vines on untilled or eroded areas to provide winter cover for game.

When establishing cover plantings, remember that cover must be designed to conceal nests and young, protect animals from the heat of the sun and provide shelter from chilling rains. It must be thick enough to allow escape from enemies and strong enough to protect the animals from snow and wind in winter.

Techniques for providing food include:

1. Clovers:

The clovers are utilized quite extensively by rabbits, deer, wild turkeys and other forms of wildlife. The two species of clover that should be planted in Virginia for wildlife are red clover (*Trifolium pratense*) and white clover (*Trifolium repens*). The type of white clover normally used is ladino, which is characterized by its rank growth habits, having large leaves and flower heads. When clover seed is purchased it is essential to obtain certified seed. Red clover is a biennial or short-lived perennial, while the white clover is a perennial. The life of the planting depends on how well the seed bed is prepared and then how well the annual maintenance of the plot is carried out each year. Rye or oats should be used as a cover or nurse crop when clover plantings are established.

The planting sites should be located close to adequate cover and should be approximately one-half acre in size (70 feet by 300 feet). If the area is managed for a particular species (such as rabbits on a beagle trial area), soil samples should be collected and sent in for an analysis of lime requirements. Normally, two tons of agricultural limestone per acre is adequate and can be spread before or during the plowing of the land. To insure a well-prepared seed bed, the land should be plowed and disked twice.

Red clover should be sown at the rate of four to six pounds per acre, and ladino clover should be sown at the rate of three to five pounds per acre. Be sure to inoculate legume seed with the proper bacteria. When rye and oats are used as cover crops, they should be sown at the rate of one and one-half bushels per acre. Where practical, all seed should be drilled in with a

grain drill. At the same time that the seed is sown, 150 to 500 pounds of 2-12-12 commercial fertilizer should be drilled in per acre.

2. Grasses:

Various grasses can be established as permanent plots for wildlife. The following species are most commonly planted: Kentucky bluegrass (*Poa pratensis*), meadow fescue (*Festuca elatior*), Kentucky 31 fescue, rescue grass (*Bromus catharticus*), and Hurds grass (*Agrostis alba*). Periodic mowing is important in managing these areas to produce quantities of succulent food for deer, rabbits and turkeys. These plots should be established adjacent to adequate cover, when possible, on areas such as power line rights-of-way, fire lanes through forested areas or in open fields of low-quality food. Grasses are sometimes used in various mixtures, but it is best to establish only one species to each plot.

The grass plots are established by plowing, disking, liming, fertilizing, and seeding. Additions of lime or fertilizer along with mowing are essential to the effectiveness of the grasses planted for utilization by wildlife because otherwise the mature plots become rather tough with age. Check with local agricultural workers as to when and how to establish grass plots for wildlife in your area.

3. Annual Game Bird Mixture:

The "annual game bird mixture" planted in Virginia by farmers and sportsmen is the most popular of all wildlife plantings in this state. This mixture was developed by the Virginia Game Commission to be planted for deer, turkey, quail and rabbits. Approximately 75,000 pounds were planted in 1958. The mixture contains eight different kinds of seed: Korean lespedeza,



Commission Photo by Kesteloo

Wildlife plantings help provide adequate food and cover for game during winter months when the supply is normally short.

rape, milo, German and brown top millet, buckwheat, peas and soy beans. This mixture should be sown on *well prepared* land at the rate of 25 pounds of seed per acre and fertilized at the rate of 450 pounds of complete fertilizer per acre. The recommended planting size is from one-eighth to one-quarter acre.

4. Rotary Mower:

The last few years have seen the rotary mower emerge as a valuable game management tool. Operating on the power take-off and hydraulic system of a tractor, this machine cuts a five-foot section through almost any type of brush that a tractor can over-ride. It can cut pine and hardwood saplings up to three inches in diameter. It is an excellent machine to cut brush, trumpet creeper and other undesirable plants. On wildlife management areas such as Camp Pickett in south-central Virginia where abandoned crop lands have been out of production for approximately 15 years, the ecological succession of plant life is at the stage where a great deal of the area is not producing food suitable for wildlife. On such areas the rotary mower is ideal for controlling brush encroachment. The aftermath of such brush cutting is fresh green succulent growth of plants that can be used by wildlife.

This same machine can be used successfully to perform annual maintenance on permanent grass plots planted for wildlife. We are familiar with rabbits grazing beside the highways on the tender grass that results from mowing operations. We can apply this same principle on field trial areas or other areas used to produce an abundance of rabbits.

With the rotary mower, cut strips through fields from 20 to 30 feet in width. This will provide tender plants adjacent to cover. Cut these strips three to four times during the growing season.

Prepare now for wildlife; do not think of the welfare of game just during the hunting season. The above practices are but a few of the techniques used in game management to help provide food and cover for game all through the year.



Commission Photo by Shomon

Ladino clover is a type of white clover often used for wildlife food patches. It is prized by deer, rabbits, and wild turkey.



Commission Photo by Kesteloo

The gray fox is common throughout the brushy and wooded areas of the South. It is distinguished by its pepper-and-salt coat with buffy underfur; long, bushy tail with a median black streak down its total length, and tipped with black; and its rusty-yellowish sides of neck, back of ears, legs and feet.

The

GRAY GHOST

of

Southern Woodlands

By F. NELSON SWINK, JR.

Mammal Control Supervisor

THE expression "sly as a fox," is well-founded when referring to the gray fox of Virginia. Many people think this animal is rare in the State. In some areas, people don't even realize it exists. But the gray fox—our wild "Gray Ghost of the South"—is just playing it slyly. It is found in every Virginia county and is quite common in most of the counties.

A small four-footed, reddish-tinged, bushy-tailed, sly and cunning animal, the gray fox, sometimes called the "treefox," is also often called many unprintable names. It occurs throughout the temperate zone, but is far more numerous in the southern reaches of the zone. The largest known populations occur in southeastern United States.

The gray fox is one of the natives of the Old Dominion. It was here when the white men landed, according to the early writings of Captain John Smith in 1612. He described them as being like "our silver-haired Conies, of small proportion, and not smelling like those of England." William Byrd, writing about 1730, said, "One

has also foxes in this land. They are gray, but do not smell as bad as the European (variety), have reddish hair on their ears, and are unusually big, beautiful and always fat. When they are hunted, they take refuge in trees." The bones of gray foxes have been found in many of the bone caves left by prehistoric man in eastern United States.

Although residents may contend that there are no gray foxes in their area, trappers will take many gray foxes in that same area without taking a single red fox on the line. This is particularly true of areas in western Virginia. A Rockingham County trapper was asked to catch some of the foxes in the Singers Glen section of that county. Residents of the area reported seeing red foxes frequently, and that these "reds" were causing considerable damage to young turkeys on open ranges.

In 33 days, the trapper caught 42 gray foxes and only one red fox in an area of approximately four square miles.

Many people just don't know the difference between



Commission Photo by Shomon

Young gray foxes. Thirty pregnant female gray foxes were examined by the writer, revealing an average of 4.9 young per female. This large an average is higher than has been reported elsewhere and may indicate a faster recovery rate in the gray fox population here than was previously suspected.

the two foxes. Adult gray foxes often have considerable reddish-tinged fur around the ears, throat, legs and flanks. It is not surprising that, with only a fleeting glance, he is called everything but a gray fox.

At present, gray foxes outnumber red foxes about 10 to 1 in many parts of the state. Some places the ratio is even greater, while in a few places the ratio is as low as two to one or even one to one. Areas in eastern and southeastern Virginia reportedly have large populations of both species of foxes. The extreme southeast corner has very few if any reds, but grays are plentiful.

The gray fox is only slightly smaller than his red cousin, having a shorter muzzle and shorter legs. In general, there is a grizzled gray on the upper parts, with

a reddish tinge on the lower flanks, lower throat, neck and around the ears. The belly is usually whitish-gray to reddish-gray. The tail is bushy with a large black tip and a black band running the length of it.

Males and females are approximately the same size, the weights ranging from 8 to 11 pounds in adult animals, the average being 8 to 9 pounds. Young grays frequently have less reddish-tinged fur than adults and are thus easily distinguished from the adults in the fall and early winter months.

Gray and red foxes seem to tolerate each other but probably avoid contacts as much as possible. There is little evidence to support the theory that one can drive the other out of a given area. Usually some disaster overtakes one before the other appears in large numbers. The author noted this during a lengthy study of red foxes in southwest Virginia some years ago. Extremely high populations of red foxes were noted and reported; then an outbreak of rabies reduced the population to a point near extinction in the area. Two years later, gray foxes were seen in much of the area and their tracks were noted with increasing frequency. In two more years, red foxes were again noted on the area, but the gray fox was well established over the area and the red fox population has not reached the proportions that it formerly enjoyed.

Other evidence of intolerance was illustrated on a trapline in the winter of 1957-58. The traps were set less than 50 yards apart in a field. Upon arrival to check the traps early the next morning a red fox and a gray fox were found caught. The red fox had killed the gray in the trap and had walked to the next set and been caught. Ten foxes came from that farm and two other grays were killed in traps before a pair of adult reds were taken. In the wild the author doubts that this is the rule, however. Probably each goes its separate way.

Virginia State Chamber of Commerce Photo

Many people prefer the gray fox over the red fox for hunting because it generally does not travel great distances nor cross many busy highways.



Gray foxes breed from late February to early April. After a gestation period of 61 to 63 days, four to six pups are born in a den in a rock cliff, hollow log, or in an old abandoned slab or sawdust pile. This large a litter usually assures survival of several of the pups despite hunting and trapping pressure, possibly one of the major reasons that rabies is able to continue in endemic form in many parts of the Commonwealth.

Gray foxes have very few enemies in the wild. The bobcat is known to kill and eat gray foxes on occasions, and the red fox will also kill gray foxes sometimes, as described above. Young gray foxes may be preyed on by great horned owls at times, but no definite records of this can be located. Man and his dogs are probably the most serious enemies of this sly little animal. They undoubtedly keep more pressure on a population in a given area than all the other natural enemies put together.

Gray foxes are subject to several diseases, the most prevalent of which are rabies and distemper. Rabies has been in the population for a number of years and has made some spectacular appearances, such as the outbreak in the Shenandoah Valley and in southwest Virginia last summer and fall. Seldom, however, does the disease eliminate enough foxes at any one time to exert any degree of control on the population. The gray fox has been the major carrier of rabies in Virginia for the past five or six years and has caused considerable damage to livestock. It has been the major source of human exposures to rabies for almost as many years.

Distemper can be very disastrous to a fox population, but is usually local in scope and does very little to control foxes over a large area. Gray foxes apparently are not affected by mange, although very little information has been obtained on this disease among the grays. It is a serious problem among the reds, however.

What does the gray fox eat? Like his red relative, he will eat nearly anything he can find. High on his preferred list are rabbits, poultry, mice and rats, apples, corn, wild cherries, persimmons, blueberries, beetles and many other such tid-bits.

The grays will hunt an area very closely and will harass game birds and animals. Game animals make up a good share of its diet, particularly rabbits and squirrels, but not any more than is found in the diets of the other predatory animals. Game birds are taken by chance as they are available. If the gray can't take a bird, it moves on to something else it can catch.

Availability of the food item is the chief factor determining what it eats, as it is with any predatory animal. If the fox can't catch it or it is not there to catch, it will take what is more easily obtained. Here in Virginia, rabbits, mice and rats, fruits, poultry, insects and other birds make up the bulk of the diet.

The value of the gray fox is found in the sporting interest he creates. Many foxhunters don't like him. They say he won't give us as good a chase as a red fox; that he holes-up or trees if pressed too closely by the hounds. On the other hand, the writer has talked with many people

that prefer the gray over the red for hunting. This may be due in part to the very fact that he won't travel great distances when chased by the hounds and he won't cross too many busy highways, inviting trouble for the hounds. When chased from horseback and with fast long-legged hounds in fairly open country, he isn't much of a match for this combination, but put in the brush it's quite a different story. He can slip along the ridge tops, up the hollows and through the thickets with great agility, and give the hounds a merry chase and the hunter many a pleasant hour.

His fur is coarse and has never been able to compete with red fox fur in demanding a price, but the fur is used for trim by some furriers.

Control of the gray fox is reached with the same methods used for the red fox, mainly through trapping. He is just as easily lured to a trap, but differs from the red in that he will return night after night to play around with a set if he is not caught the first night he runs across the set. This is true of poorly made sets, where the fox locates the trap and uncovers part, or all of it. He can make the life of a trapper miserable with his tactics and has outsmarted many a would-be trapper. He is taken in dirt-hole, scent post, water and trail sets most readily, but the dirt-hole sets seem to be the most widely used and undoubtedly the most effective in capturing the little gray raiders.

In Memoriam

Many people were grieved to learn of the recent deaths of two members of the Commission's law enforcement division. Edward J. Gorman, 43, Chesterfield County game warden for more than 17 years, died June 29 at a Richmond hospital. Lewis Ashton Coleman, Amelia County warden since April 1922, passed away July 20, also in Richmond.

Mr. Gorman, who lived at 2100 Cherokee Road, had served as the county's game warden since January 1941. As a youth he had been a boxer and amateur baseball pitcher. He attended Midlothian High School.

Survivors include his wife, Mrs. Esther Wagner Gorman, and son, Edward James Gorman III.

"Eddie" Gorman, as he was known to his many friends and associates, was very popular in his pursuit of duty and will be sorely missed. He was recently featured in a film sequence included in the Commission's latest movie production, "The James River."

Mr. Coleman, who lived at Manuboro, Virginia, was one of the state's original game wardens. Born August 29, 1888, he joined the Commission in April of 1922. After 35 years of service, he retired June 30, 1957.

A most reliable warden, Mr. Coleman was devoted to conservation in all its various aspects.

Survivors include his son, Capt. W. Emerson Coleman of Fort Bragg, N. C., and daughter, Mrs. Robert Belvin, Jr., of Petersburg, Va.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

OPEN SEASON DATES SET FOR RAILS, GALLINULES, DOVES AND WOODCOCK. Virginia's dove hunters have been given five more half-days of shooting and twice the possession limit after the first day of the season than they were given in 1957. Within the framework set up by the U. S. Fish and Wildlife Service, the Virginia Commission of Game and Inland Fisheries has adopted these seasons and bag limits:

Dove—65-half-day split season, September 15-November 10 and December 27-January 3. Shooting allowed from noon until sunset. Daily bag limit 10, possession limit 20 after first day of season.

Rails and Gallinules—September 13-October 31. Bag limit (except sora) 15 daily, 30 in possession; sora 25 daily, 25 in possession.

Woodcock—November 17-December 26. Bag limit 4 a day, 8 in possession.

TURKEY SEASON REDUCED IN EASTERN VIRGINIA. The turkey season in Virginia in those counties east of the Blue Ridge Mountains in 1958-59 will be December 20-January 20. The 1957-58 season was November 18-January 20. Chester Phelps, executive director of the Virginia Commission of Game and Inland Fisheries, in explaining this regulation, has pointed out that the wild turkey has never been plentiful in Virginia in recent times and that a constant watch must be maintained on its status. Over half of the eastern counties have had a drop in their legal turkey kill during the past three seasons, statewide totals for these years being 2,797, 2,470 and 2,060, he noted. One solution to the problem, protection for the hen turkey, was proposed by the Commission last spring but opposed by the public, so the shorter season was proposed instead to lower the harvest, he said. This should happen because, while most of the turkeys are taken during the early part of the deer season in normal years, this will not be true with a later turkey season opening. It is hoped that a reduction in kill will permit the turkey population to return to its more abundant level of a few years ago.

VIRGINIA'S 1958 ELK SEASON. Antlered elk will be legal game in Virginia on November 17 and 18 in Bland, Giles, Botetourt and Bedford Counties. There will be no limitation on numbers of licenses sold, but: (1) A special elk license sold only by the clerk of the counties having the season will be needed; (2) The license will cost \$35.00 for non-residents, \$5.00 for Virginia residents; (3) In addition to the special elk license all those hunting on National Forest properties need a \$1.00 National Forest stamp. All those hunting in Bland or Giles county will need a \$1.00 local deer-bear-elk damage stamp for each county. Successful hunters must have the elk tagged at an official checking station. Those wishing to hunt deer or small game at the same time must have, in addition, a regular hunting license and a big game license. The elk herds in these counties are small. Although the main purpose of the open season is to harvest some of the surplus bull elk and to lessen crop damage, and hunter success is expected to be low, it will provide an unusual big game-hunting opportunity.

BIG GAME LICENSE NOW REQUIRED. All persons hunting deer, bear or turkey in Virginia are now required to have a big game license. This license, issued free to those hunting in their home county, will cost \$1.00 for those hunting in any other county than their own and \$2.50 for non-resident hunters. The new license includes paper tags that must be removed and immediately fixed to the game at the point of kill. All three species are then to be taken to one of the regular big game checking stations, where official big game tags will be affixed as in previous years.

NATIONAL OUTDOOR RECREATION RESOURCES REVIEW COMMISSION ESTABLISHED. President Eisenhower recently signed S. 846, passed by Congress to establish a National Outdoor Recreation Resources Review Commission. The new Act creates a bipartisan commission of 15 members, composed of seven citizens appointed by the President and two majority and two minority members from both the Senate and House Interior and Insular Affairs Committees. The Commission is to inventory national recreational resources, project expected recreational usage to the years 1976 and 2000 and recommend means of meeting anticipated needs, reporting finally by Sept. 1, 1961.

COST OF DUCK STAMP RISES. President Eisenhower has approved a bill increasing the price of a duck hunting stamp from \$2 to \$3, effective July 1, 1959. All net proceeds from the duck stamps sold in future will be used for the acquisition of federal refuge lands.



Lt. Col. W. C. Huber, game warden Nelson Phelps and game biologist John Redd (left to right) plan new wildlife development areas.



Military and Game Commission personnel examine portion of fire lane three miles long with an average width of 100 feet planted with fescue grass.



Fertilizer is applied before planting a food patch of annual game bird mixture.

Operation

Camp

Camp Pickett, a military reservation of 47 Dinwiddie Counties. Approximately 38,000 acres are available on a "first come, first served" basis. About 100 prospective hunters must show a valid state hunting license to enter the areas. All game must be checked because state game laws are strictly enforced.

A four-year cooperative habitat improvement project was initiated by the Game and Inland Fisheries and Army personnel. In the first year, 100 annual game bird mixture and 27 half-acre plots of rough growth were mowed to encourage grass. In the second year, 50 half-acre plots of grain and clover were planted.

At the end of the four-year period, it is expected that 100 plantings of winter grain and clover and 100 food plots will be completed. A substantial increase in game is expected.

Commission



Winter food planting of red top clover and oats. Rabbits, turkey, deer and quail feed on it.



Tender new growth of ladino clover on fire lanes is utilized by rabbits, turkey, and deer.

Wildlife

Pickett

acres, is located in Nottoway, Brunswick and is open to the general public for hunting by permit. One hunter a day may be accommodated. Prospects are assigned to one of seven hunting areas within county limits and regulations apply to this area. The program was begun by the Virginia Commission of Game and Inland Fisheries in February, 1957. In 1957, 296 quarter-acre plots of grain and clover were planted, and 80 acres of soybeans, 128 half-acre plots of game bird mixture and

and that 600 plantings of annual game bird mixture and miles of fire lanes planted with various game crops have already been noted.

by Kesteloo



John Redd, game biologist, examines sample of oats from a winter food planting.



Fescue grass is mowed at least once a year to encourage succulent tender growth for deer, rabbits and turkey.



After preparation, the area is planted with annual game bird mixture consisting of Korean lespedeza, rape, milo, millet, buckwheat, peas and soy beans.



Growth of fescue grass in a portion of the fire lane is checked by the game technician, game warden and military personnel.



Red top clover and rye are planted together for winter food for wildlife.



PRINCE WILLIAM FOREST PARK

A unique Virginia National Capital Park near Washington, D. C., is providing group camping pleasure for thousands of metropolitan but outdoor-minded Americans

By THEODORE T. SMITH, *Manager*

*Prince William Forest Park
Triangle, Virginia*

ALTHOUGH little-known to the general public, Prince William Forest Park, named for the Virginia County in which it is located, has provided organized group camping for some 60,000 children and 140,000 adults from the Washington, D. C. metropolitan area in the 23 years of its existence. Many families as well have enjoyed the pleasure of camping in this 11,000-acre reservation, the southernmost of the National Capital Parks, which are a unit of the National Park Service.

The primary use of the park is by organized groups of campers, but public-use facilities including a picnic area, hiking trails, tent sites and a nature center are being expanded to meet the demands of road-weary Route U. S. 1 travellers and military personnel stationed nearby.

Virginians comprise about 45 percent of the total number of campers making up the organized groups. Health and character-building organizations which lease the group camps, mainly for underprivileged children during ten weeks of the summer months, include The Family and Child Services, The Salvation Army, the Potomac Area Camp Fire Girls and the Young Men's Christian Association.

Many of the children referred to these camps experience for the first time in their lives the feeling of getting away from city streets and sidewalks, to learn how to get along and live in the forest. A new group of about 700 campers moves into the camps every two weeks.

During the spring, from April 1 to June 15, and fall, from September 1 to November 1, many organized groups such as churches, Boy and Girl Scouts and hiking and camping associations lease the camps on a short-term basis, usually over the weekends.

In 1957, 168 organizations brought in 12,739 campers and spent 28,292 camper nights in the forest park during the spring and fall "short terms."

Each of the five organized camps has facilities for 120 to 180 campers, including a lake for swimming and

boating, a large military-type mess hall, recreational, craft and nature interpretation activity buildings, and an infirmary.

Of the thirty or more counselors at each camp, one is assigned to the nature program and one is assigned to craft activities. The park naturalist assists these camp counselors to achieve, as a primary objective, the stimulation of each camper's interest in nature, crafts, conservation and other outdoor activities to assure him a pleasant and unforgettable outdoor experience. Each camper is given a vivid concept of the forest as a wild community of living things dependent on one another and all dependent on the soil, water, and sunshine.

Prince William Forest Park is situated in lower Prince William County in gentle, rolling woodlands, 20 miles north of Fredericksburg and 32 miles south of Washington, D. C. The main entrance to park headquarters is

A large trail map at the Pine Grove Picnic Area provides a convenient starting point for hikers. There are 40 miles of trail to explore in Prince William Forest Park.

National Park Service Photo





National Park Service Photo

Over 200,000 young people and adults have enjoyed group camping at Prince William Forest Park. The park naturalist gives campers a concept of the forest as a wild community.



National Park Service Photo

The park naturalist conducts nature walks, illustrated talks and campfire programs, and assists with individual and group nature study work.

off of Route U. S. 1 between the towns of Dumfries and Triangle. A manager, assistant manager, secretary, three caretakers and a maintenance force are on duty to care for the park's grounds and 265 buildings.

Originally, the park comprised 16,000 acres and was named Chopawomsic Recreational Demonstration Area. However, after 5,000 acres including Chopawomsic Creek were taken over by the U. S. Marine Corps Schools for training purposes during World War II, the present name was adopted.

A unit of the National Capital Parks, the park is administered by the National Park Service of the U. S. Department of the Interior, which is dedicated to conserving the scenic, scientific, and historic heritage of the United States for the benefit and enjoyment of its people. Additional National Capital Parks areas in Virginia are the Custis-Lee National Memorial, the Marine Corps War Memorial, the Mount Vernon Memorial Highway and the Roaches Run Waterfowl Sanctuary.

The Pine Grove Picnic Area in Prince William Forest

Park is open throughout the year to families, organizations, and the general public without cost. Situated near park headquarters, it includes a shelter, fireplaces, tables, playfield, water supply and comfort station, with facilities for approximately 400 picnickers.

Nearly 40 miles of trails afford access to the wilder regions of the park. For many miles, trails follow along the cool, shady North and South Branches of Quantico Creek. Several trails follow the old ridge roads over which were rolled tobacco, and one trail becomes part of the Old Telegraph Road. A large trail map at the Pine Grove Picnic Area provides a convenient starting point for hikers.

Six tent sites, provided with fireplaces, comfort station, and water supply, have been established at the Nature Center for year-round organized group camping, each having a capacity of from 20 to 100 persons. In addition, a tent site for families has recently been opened near the Nature Center.

The Nature Center, with museum, reading room, nature trail, and workshop, is the hub of nature activities in the park. Here the park naturalist conducts nature walks, illustrated talks, and campfire programs, and assists with individual or group nature study work.

Since the park is a wildlife sanctuary, it contains many interesting resident animals in a variety of habitats including streambanks, river bottoms, old fields, borders of fields and woods, pine woods, and hardwood ridges. Wild turkeys have been observed every year for the past ten years. A good number of white-tail deer inhabit the park's dense thickets, brush and woodlands. The descendants of three pair of beaver, released five years ago, now inhabit several active colonies. Although most of their dams wash out each year, there remains along the shores of the North and South Branches of Quantico Creek considerable evidence of cuttings and debris from these dams.

One hundred twenty-three birds have been reported for the park, which has become a very popular birding area. About sixty of these are summer residents, twenty-three are permanent residents and about forty are transients or migrants.

All through the park are scenes of interesting national history. The northeastern edge of the park borders the historic village of Dumfries where, as early as 1713, tobacco warehouses were built on the banks of Quantico Creek. Ocean-going cargo vessels called at its docks located close to what is now Route U. S. 1. At that time, the port was considered the second most important port of entry in the United States based on the volume of shipping, the New York port being first.

Dumfries owed much of its property to the very thing that killed it. The land on the Quantico Creek watershed, most of which is now in the park, was cleared for growing tobacco and grain. The light soil washed easily, and by the late 1700's enough land lay unprotected to threaten the welfare of the port. It took two great floods to blight the future of the area, the first one of which silted in Quantico Creek and cut Dumfries off from the Potomac River.



Virginia State Chamber of Commerce Photo



National Park Service Photo

Families traveling north or south on Route U. S. 1 camp overnight in the park (left). Many of the children at this camp experience for the first time in their lives the feeling of getting away from the city to live in the forest (right).

Docks, where boats once unloaded at the foot of town, were left high and dry, and a canal was dredged to another dock area near the Potomac. Another flood silted in the canal almost before it was completed. Meanwhile, what soil had not been washed away had been exhausted by too much tobacco and grain culture. Yields and production went down and so did the importance of Dumfries as a port of entry.

Today, the patchwork of abandoned farms and woodlands in various stages of natural succession forms the landscape mosaic of the park. Old fields are first invaded by pure stands of Virginia pine. Gradually the pine gives way to hardwoods—hickory, oak, beech and yellow poplar—and a green understory of mountain laurel, holly,

and spice-bush. Especially along the riverbanks, the forest once again appears primeval.

Along the streams of Quantico Creek, Coastal Plain deposits of sand, gravel, and clay are exposed in steep-sided valleys. The stream has worn itself down to bedrock of granite, schist, quartzite, and slate-rock of a much older era.

Traces of gold were found, and for nearly 30 years pyrite, containing iron and sulphur, was mined at the Cabin Branch Mine located at the confluence of the North and South Branch of Quantico Creek.

An illustrated brochure including a map of the area may be obtained by writing to the manager, Prince William Forest Park, Triangle, Virginia.

Commission Personalities



**Patrick
Henry
District
Supervisor**

ISAAC HUGH VASSAR, supervising game warden in the Patrick Henry District, joined the Virginia Commission of Game and Inland Fisheries as Charlotte County game warden in 1938. Born in Charlotte County in south-central Virginia on November 1, 1898, "Ike" has never moved from his farm home there. The World War I Armistice was signed two days before he was to be drafted into the Army. In 1920 he married the former Flora Mae Elder of Brookneal, Campbell County. The Vassars have one

daughter, three sons and nine grandchildren.

After finishing school at Charlotte Court House, Vassar farmed for himself for several years and worked as deputy treasurer from 1932 until he joined the Commission as county game warden. Appointed supervising warden in 1946, he is now in charge of game, fish and dog law enforcement in Amelia, Appomattox, Brunswick, Buckingham, Charles City, Charlotte, Chesterfield, Cumberland, Dinwiddie, Fluvanna, Goochland, Greenville, Lunenburg, Mecklenburg, New Kent, Nottoway, Powhatan, Prince Edward and Prince George Counties and the cities of Richmond and Petersburg. Since Henrico County has hired a special dog warden, he is responsible only for game and fish law violations in that county.

The Patrick Henry supervisor works closely with his force of 27 county

game wardens and 3 district conservation officers, who include in their cooperative patrols much of the James River, the Staunton River, Buggs Island Lake, Holliday Lake and the Powhatan Lakes.

Commended by the Commission for his fine work in helping to break up deer hunting regulation violations in New Kent County in February, 1958, Vassar, by inspiring his wardens to sell more subscriptions to VIRGINIA WILDLIFE than those in other districts, has also for four straight years won the top subscription contest prize, a trip to the annual Southeastern Association of Game and Fish Commissioners' conference.

He has been a steward in the Phenix Methodist Church since he was 21 and is also active in the Charlotte Ruritan Club and in the St. John Masonic Lodge No. 144 at Charlotte Court House.

Firearms Safety in High School

By JOHN WILFRED COURTNEY, JR., *Secretary*

Virginia State Rifle & Revolver Association

MANY parents have had the foresight to personally instruct their children in the safe and proper use of firearms and then take them into the woods and fields for experience in safety and performance under their personal supervision.

Miserable is the parent who has purchased a young son a gun, turned him loose without adequate instruction, and later has been brought to the scene of a disaster which might have been avoided.

In Virginia there are approximately 60 junior rifle clubs and 45 senior rifle or pistol clubs affiliated with the National Rifle Association. An important phase of the programs of these clubs is instruction in the safe and accurate use of firearms. Even if each of the 105 clubs were located in a different locality, however, adequate firearms safety instruction would still not be available to all.

The National Rifle Association has a hunter safety course which is tailor-made for use in high schools. This course has been given annually at West Point High School in Virginia since October 1953. The course lasts for a minimum of four hours and includes lecture, demonstration, actual firing of a rifle and examination.

Since it is a part of eighth-grade health and physical education, the student's grade for the hunter safety course appears on the report card.

This course does not pretend to develop expert riflemen. Its purpose is to teach safety with firearms in the field and in the home.

A sequel to the NRA Hunter Safety Course in a high school is the NRA Basic Course in Rifle Marksmanship. At West Point High School, a non-military high school with less than 200 pupils, the rifle marksmanship course is promoted as a scholastic club, the West Point High School Junior Rifle Club.

The minimum length of time for this course is 12 hours, and this is often extended to 16 or 20 hours to give more leisure time for instruction in firing from the prone, sitting, kneeling and standing positions, for firing scores for NRA junior qualification awards, and for varsity and junior-varsity team tryouts. This is followed by dual matches with other teams and competition in state and national junior championship tournaments.

This small school has recognized a number of advantages in having a rifle club, one of which is that a boy or girl may be a member of the varsity team in spite of

The National Rifle Association hunter safety course for use in high schools includes lecture, demonstration, firing of a rifle and examination. It is intended to teach safety with firearms in the field and in the home.

Photo by H. A. Humphreys



physical handicap or size, since fine shooting depends more on practice and coordination than brute strength.

The National Rifle Association, 1600 Rhode Island Ave., N.W., Washington 6, D. C. will furnish anyone with the literature and information needed for both of the courses. Inform the NRA that you wish to organize a junior rifle club in your high school, and the proper affiliation forms and order forms will be sent to you at once. If you do not have a rifle range available, request a set of plans for permanent backstops and temporary backstops which can be used on a basketball court.

After you have found an instructor, organized your club and become affiliated with the National Rifle Association, the next step is to become enrolled with the Director of Civilian Marksmanship, who is in charge of the operating office of the National Board for the Promotion of Rifle Practice. Through the D. C. M., a limited number of .22 caliber rifles are available for lending to NRA-affiliated clubs for civilian training. In addition, limited supplies of ammunition and targets are available when adequate funds are appropriated by Congress. After enrollment with the D. C. M. an annual report on qualification firing is required. In addition, an annual inventory report is required of those clubs which have requisitioned government property. The D. C. M., upon receipt of a report of firing, furnishes qualifying youngsters with appropriate medals. The NRA has medals, pins, brassards and diplomas for youngsters who qualify.

Finding a NRA-certified rifle marksmanship instructor for a high school rifle club may be a problem since no Virginia college carries an accredited course for marksmanship instructors. Possibly an instructor may be borrowed from a local rifle or pistol club, or a teacher may join a local active club and have the club's instructor coach him or her during a regular basic marksmanship course.

Briefly, an adult has more than one means available to become a NRA-certified marksmanship instructor. First of all, he (or she) must be an individual member of the NRA and at least 21 years of age. In addition, it is necessary that the person have given at least 100 hours of marksmanship instruction, obtained recommendation from a certified instructor and passed a written examination, or attended a NRA Instructor Training Course.

A NRA instructor course may be conducted by a NRA training counselor. Such a course is also available each year at the National Rifle and Pistol Matches at Camp Perry, Ohio. Additional information is available from the NRA.

Let's presume that you now have an instructor; you either have a range or plans are in progress for the setting up of a temporary range in the gymnasium or some other room that will give you space of at least 20 feet by 65 or 70 feet; your junior rifle club, with the blessings of the principal and school board, has become affiliated with the NRA, enrolled with the D. C. M., and is awaiting a shipment of government rifles which may take from one to three months. During this period of waiting, you will find excellent opportunity to distribute

NRA junior rifle handbooks and two pamphlets, *Shooting's Fun for Everyone* and *What Every Parent Should Know*, which are available at no charge from the Sportsmen's Service Bureau, 250 East 43rd Street, New York 17, New York. Also available for showing are three educational 16-mm sound motion pictures. "Shooting Safety" is available from our Commission of Game and Inland Fisheries, 7 N. Second Street, Richmond 13, Virginia, and "Trigger Happy Harry" and "How to Shoot a Rifle" are available from Ideal Pictures, 219 E. Main Street, Richmond 19, Virginia.

Even though you are still without target rifles, it would be quite practical to proceed into the NRA Hunter Safety Course lectures, demonstrations, examinations and practical firing with rifles or shotguns which the pupils themselves would use in hunting. The NRA hunter safety handbook should be furnished each pupil and the instructor who has completed the appropriate NRA hunter safety instructor examination should follow the NRA Hunter Safety Course instructor's guide. The list of necessary equipment is found in these manuals.

Free "Ranger" targets may be obtained from the Sportsmen's Service Bureau. Sources for assistance in demonstration of a wide variety of firearms might be the police department, sporting goods dealers, service personnel, national guardsmen, reservists and sportsmen.

The next step is the NRA Basic Rifle Marksmanship Course. You will find the Army .22 caliber rifle with sling very practical for the basic training and for firing the D. C. M. qualification course. Later, however, after visiting other clubs, most of the shooters will want to change to commercial target rifles and will consider purchasing a top or medium-grade target rifle.

For those who cannot afford one, it would be practical for the club to purchase a few or accept several as donations from civic organizations. A few rifles weighing no more than seven pounds should be available for the younger and smaller shooters since the military and other medium-weight target rifles weigh about nine pounds.

Other items which will add to the comfort of the shooter are a mat, a commercial shooting jacket or some other heavy jacket, and a shooting glove or other heavy glove to protect the hand and wrist from the front sling swivel and sling. Several spotting scopes or strong field glasses are very useful. The NRA basic rifle marksmanship handbook should be available and the instructor should have the instructor's guide, a NRA smallbore rifle rules book, NRA wall charts, equipment for triangulation and several Paige training aids.

Once these courses become available in the majority of our high schools, it is logical that hunting safety will increase in Virginia as it has increased in other states in which firearms safety courses in high schools have become a reality. In addition, I feel that if the opportunity is given, rifle leagues will become as popular in Virginia high schools as other sporting event leagues.

Good shooting, but more important, greater safety for all who like to shoot should be the result.

ARMoured ANTIQUES

By GEORGE H. HARRISON

Educational Assistant



Commission Photo by Harrison

Snapping turtles are scavengers and help maintain the ecological balance of a pond.

IN the old fable, "The Hare and the Tortoise," the tortoise won the race, slow though he was, because he kept moving steadily toward his goal.

In a fight for its life with other animals, the turtle has no need to run, for it knows that its strong shell will protect it against its swiftest enemy.

Two hundred million years ago, when the ferocious dinosaurs roamed the earth, turtles were lumbering about the earth too. They had no way of fighting their huge neighbors, but their armour permitted them to survive. The turtle outlived the dinosaur and thus won another race. Only the fossil remains of the dinosaur are left today, but the pokey old turtle lives on.

Turtles are found and caught more easily than any other animal in the woods. Because they move slowly, and are quite harmless, they are perfect for the backyard zoo.

The shell is the turtle's house which it carries along wherever he goes. Few other backbone creatures have such excellent protection.

Turtles are cold-blooded vertebrates that belong to the order of reptiles, as do snakes, lizards, crocodiles, and alligators.

Turtles live nearly everywhere in the temperate zone. Since they are cold blooded, they can't live in the Arctic and the Antarctic, but in a land like Virginia, turtles are quite common. Virginia has 15 different species of turtles that live in water, swamps, wet land, and dry land according to the type of turtles they are.

They range in size from the little mud turtle, three or four inches long, to the great sea-roving leatherback turtles that measure from seven to eight feet in length and weigh from 1,000 to 1,500 pounds.

The jaws of all turtles have sawlike edges. With these they tear their food into pieces and swallow the piece whole. They have no teeth. Their chief food is small fish, tadpoles, snails, and insects. Wood and box and other type land turtles also eat leaves, tender shoots, and berries. The big snapping turtles often drag ducks and

other waterfowl under water by their legs.

Their eyes are protected by upper and lower lids. Their senses of sight, taste, and touch are well developed. However, their hearing is imperfect, especially among those living in water.

Turtles can not stand long exposure to direct sunlight or cold. They therefore hibernate in the winter, burying themselves in the mud at the bottom of ponds or rivers or burrowing into soft earth and rotten logs in the woods.

All turtles, even those that live in the sea hundreds of miles from land, must go ashore to deposit their eggs. The female digs a hole with her front feet and then backs into the hole and drops the eggs. She then covers the opening and pats down the soil. She has no further interest in her young.

Depending on the kind of turtle, the eggs number from five or six to a thousand. They have tough leathery shells. There is no fixed incubation period, the hatching depends on moisture and temperature. A box turtle may hatch in 80 to 106 days.

Men as well as skunks, raccoons, snakes, and birds devour the eggs if they can find them.

Many people mistakenly believe that turtles live hundreds of years. They do live longer than any other backbone animal, but 100 to 150 years is about maximum.

There are many turtles with friendly, agreeable dispositions that make good pets. These turtles readily adapt themselves to their new quarters and with proper feeding and care thrive and become tame. They can learn to recognize their owner and will respond to a whistle or call. Losing their natural shyness, they come to eat out of your hand. The interesting way turtles eat, walk, swim, climb, or look at you with their inquisitive eyes first wins your attention and then your affection. This unique turtlelike behavior is enough to repay you for the small expense and little care needed to keep a turtle.

Many people believe that snapping turtles will eat all



Commission Photo by Harrison
Snapping turtles hatch from tough, leathery shells.



Commission Photo by Harrison
Some turtles make good pets. They can learn to recognize their owner and respond to a whistle or call.

the fish in their farm ponds. The first thing they want to do when they see a snapper in their pond is to set traps and get rid of them.

According to Robert Martin, assistant chief of the commission's fish division, "turtles will not hurt a fish pond. The fact that they are scavengers and keep the ponds clean should encourage people to leave them in their ponds."

Martin went on to say that turtles should be harvested

like anything else in the pond. He said that many farmers make an extra income by supplying turtles to soup companies for 10-20 cents a pound.

Although snappers do eat fish, most ponds are over populated with small fishes anyway and the few they eat will help keep the high numbers in check.

Other water turtles like the spotted and painted turtles are vegetarians and are of no concern as fish-eaters.

Wildlife Ramblings

Nature's Vegetable Garden

Nearly all parts of plants are eaten by one animal species or another.

FRUITS, rich in carbohydrates and vitamins, are especially important, relished foods. Fleshy fruits are mainly products of woody plants and are generally available in summer and fall. Some persistent ones like holly, grape, snowberry, mountain-ash, manzanita, and persimmon are also available to wildlife in winter. The widely distributed rose family provides a large proportion of the more important wild fleshy fruits including blackberry, strawberry, raspberry, cherry, rose, serviceberry, hawthorn, apple, and mountain-ash. Additional fleshy fruits of wildlife importance are grape, holly, blueberry, persimmon, sassafras, and blackgum. These are valuable to many kinds of birds and some mammals such as the raccoon, deer, bear, fox, squirrel, skunk, and opossum.

Botanically, NUTS are fruits with a dry hard exterior. Animals use these hard-shelled fruits extensively, probably because they are unusually rich



Deciduous Holly Berries

in fats and proteins and are available over long periods.

Dry fruits from woody plants as well as the seeds of pines are sometimes classed with nuts under the ambiguous name of mast. Of all the nuts, acorns are the most widely available and most commonly eaten by wildlife.

Hickory nuts, hazelnuts, black walnuts, and butternuts, because of their especially thick, hard shells, are of importance only to squirrels, chipmunks, and their kin.

Like nuts, SEEDS are concentrated

food parcels and are eagerly sought by certain creatures. They constitute the major food of many birds and small mammals, making up practically the entire diet of some common species. Weeds are generally unwelcome intruders, but because of their abundant seeds, they are more valuable as wildlife foods than most of our more attractive, showy flowered plants. The number of seeds produced on a single annual weed may be enormous. Pigweeds are known to bear as many as 100,000 seeds per plant.

Browsing and grazing mammals, some rodents, and a few gamebirds make the VEGETATIVE PARTS of plants a major part of their diet. Almost any kind of foliage is taken by hoofed browsers, though eating of tough leaves (such as conifer needles) may sometimes represent necessity rather than choice. In open land, forage grasses and other herbaceous plants become important to antelope, buffalo, rabbits, and other grazers.

—GEORGE H. HARRISON

Bird of the Month:

The Cardinal

By DR. J. J. MURRAY

Lexington, Virginia



(VIRGINIA WILDLIFE is proud to announce the start of a new monthly series of articles on the birds of Virginia by Dr. J. J. Murray of Lexington. Dr. Murray, a well-known bird authority, has for many years been editor of THE RAVEN, official publication of the Virginia Society of Ornithology. The robin will be featured in October.)

IT is only proper that the cardinal should be the first species to be described in this new "Bird of the Month" series in VIRGINIA WILDLIFE. Chosen by the General Assembly in 1950 as the Old Dominion's state bird, it is for Virginians the "bird of every month." The cardinal is one of the few birds that spends the whole year with us, rarely moving far from its birthplace although joining with its kind in small flocks in the water. Once on a snowy day in Rockbridge County I saw fifteen or twenty in one small tree, the white snow tufts and the red birds making a lovely pattern on the dark branches.

The cardinal is one bird known by every child. It is the only bird which is red all over and which has a crest. The only contrasting color is in the black patch at the base of the bill, for even the bill is red. As is the case with most species of birds, the female is duller than the male. Some think, however, that her ashes-of-roses plumage, deepening into red on the folded wings and the tail, is even more beautiful than the brighter feathers of her spouse.

The cardinal nests early and often raises more than one brood. The eggs, normally three in number, are rounded and heavily mottled with brown and chocolate. They are laid in a well-constructed nest of grass stems, rootlets and leaves, often mixed with soft grape vine bark. The nest is usually from four to eight feet above the ground, placed in a rosebush or cedar or in a tangle

of vines. It is often located near a house. I once found a nest on the bank of the Maury River, set only a couple of feet above the water in some trash caught in a branch.

The young are hatched naked but soon grow patches of down, which are replaced in a few days by feathers. After leaving the nest, the young follow their parents as long as the adults will permit, fluttering their wings and noisily begging for food. Early broods are soon compelled to shift for themselves, but I have seen young birds of the last nesting following their weary parents late into September.

One of our sweetest songsters, the cardinal has a varied repertoire. There is only a short season, during the molt and in early winter, when the male is not singing. He is a sun worshipper. In the last half of January, when the days start to lengthen and the sun is beginning to gather a little strength, he commences his chorus. First it is a simple query, "What cheer?" Then it is "What cheer, cheer, cheer?" or "Whit, whit, whit." As the days go on, he calls to his mate, "Pretty girl, pretty girl, pretty girl"; and sometimes he says, "Chew, chew, chew."

Among birds it is not customary for a female to sing, but the lady cardinal will often sing a whisper song, in form like the song of the male, but quieter, as if she were singing not to the world or even to him but for her own comfort and delectation. But her song is like her costume; it has a grace about it that warms the heart of every nature lover who is in reach of it.



YOUTH AFIELD



START A CONSERVATION CLUB

Does your school have a conservation club? If not, you ought to start one.

First thing to do is find an interested teacher in your school to be the club advisor. When you find an advisor, plan with him the projects and field trips you and your club can conduct.

Some of the field trips might include a trip to the fish hatchery, the game farm, hikes to nearby erosion sights, etc.

Projects might include tree plantings, wildlife food plantings, helping to stock fish, building bird houses and creating brush piles for rabbits.

Actual plantings around your school will be appreciated and noticed by your fellow students and teachers.

Kids have found out that conservation must be learned in the field, not from the armchair.

Remember conservation is everybody's business and it begins in your own community.

YOUTH SPEAKS

The Izaak Walton League directed a big question to the youth of America when they asked, "Is there a need for a youth organization dedicated to conservation?"

They were so interested in this question that they called together a group of 17 outstanding youngsters representing 17 states. They met at Colorado Springs at the Youth Conservation Conference sponsored by the League State Divisions and one State Council.

These boys and girls were chosen to represent the youth of their states because of an outstanding conservation achievement or project they had accomplished.

After a four day meeting, they re-

ported their findings to the League at its 36th annual convention. They found that there was a great need for a youth conservation organization. They asked that such an organization be brought about through the sponsorship and approval of the Izaak Walton League. They were in complete agreement that the best way to set up such a youth group was through a national organization dedicated to conservation.

The Izaak Walton League is now studying the proposals of the delegates and will report on their decisions in the near future.

BIRD BILLS

The next time you are watching birds, notice how they use their bills and tongues to catch food.

Birds have different kinds of equipment for catching their food.

The hummingbird, for example, has a long slender bill and a two piece tongue which forms a pair of tubes used to syphon nectar from flowers.

Woodpeckers use their long sharp bills like a chisel to make holes in trees. The woodpecker's tongue is used to pry the insects from their holes.

The flicker, also a woodpecker, uses his long sticky tongue for catching ants. His tongue is so long, he can actually reach down an ant tunnel and catch his unsuspecting prey.

The woodcock has a long slender bill which is used to probe for earth worms in the moist ground.

The cardinal, our state bird, and the rose-breasted grosbeak have finch bills which are thick and heavy for cracking seeds.

Phoebes and other flycatchers have short but sharp bills for snapping insects out of the air. These birds are skilled flyers too, in order to outwit a fast moving bug.

Hawks and owls have hooked-shaped bills for tearing flesh. They catch their food with their feet or talons, but they use their bills to tear the meat.

Ducks and geese have broad and flat bills for shoveling their food out of the water. Diving ducks shovel their food off the bottom of the lake or pond.

GOOD BOOKS

For a peep into the lives of fishes, read *Big Jack*, by Roswell Greene and Robert Candy (Houghton Mifflin). This book contains a lively account of the lives and habits of both artificial and natural bred trout from state fish hatchery to cool mountain stream where they could become a fisherman's prize if caught. Price \$2.50, 52 pp., well illustrated with line drawings. Age 10 and up.

If you like to catch animals from the ponds, creeks, and lakes for pets, then read *Pets From The Pond*, by Margaret Waring Buck (Abingdon). The book gives information on how to house and care for such creatures as turtles, salamanders, water insects, snails, and frogs found in a pond. The book also gives information on the life cycles of these creatures. \$3.00, 71 pp., indexed. Age 8 and up.

The whooping crane is one of America's rarest birds. For a very authentic and complete little book on these wonderful birds, read *Old Bill, The Whooping Crane*, by Joseph Wharton Lippencott (J. B. Lippencott), \$3.00, 176 pp., line drawings and photographs. Ages 12 and up.

Science In Your Own Backyard will give youngsters many simple yet fascinating experiments to try in their own backyard. They are easy and lots of fun to do. The book is by Elizabeth K. Cooper (Harcourt, Brace), \$3.00, indexed, line drawings. Ages 8-14.



Awards Given 1958 Virginia Wildlife Subscription Contest Winners

During the past year personnel of the Commission's law enforcement division sold 8,922 subscriptions to *Virginia Wildlife*, 1,661 more than they sold during the 1957 warden circulation contest. Top salesmen were determined by a point system; wardens were given more points for selling new subscriptions and two and three-year subscriptions than for subscription renewals.

Prizes were awarded during the Field Force Short Course at Virginia Polytechnic Institute at Blacksburg, July 7-9.

Supervisor I. H. Vassar's Patrick Henry District sold 3,224 subscriptions for a total of 10,398 points to become top district for the fourth straight year, and conservation officer Harry King of the Patrick Henry District was highest in his group with 810 subscriptions and 1,913 points. Both Vassar and King were given expense-paid trips to the meeting of the Southeastern Association of Game and Fish Commissioners at Louisville, Kentucky, October 19, 1958.

Warden Fred Brown of Fairfax County, with 919 subscriptions for 2,227 points, had his choice of a Remington shotgun or the trip to Louisville for having sold the largest number in the field force. He chose the gun.

Warden F. E. Settle, of Westmoreland County, with a total of 254 subscriptions and 1,049 points, was then awarded the Louisville trip for being the second-highest warden.

R. S. Purks, supervisor of the second-highest district (George Washington District), received a gift certificate for \$25 from Yeatman's of Arlington.

Warden R. L. Griffith of New Kent

County, with 265 subscriptions, 941 points earned rod and reel donated by Vincent's Hardware and Sport Fair Inc. of Arlington.

Warden E. D. Sheets of Shenandoah County, 192 subscriptions, 939 points—radar lamp from Thalhimer's Sport Shop, Richmond.

Warden Cameron Munden of Princess Anne County, 269 subscriptions, 820 points—reel from Arthur H. Molle, Arlington.

Warden F. C. Boggs, Spotsylvania County, 196 subscriptions, 794 points—rod and reel from Bell View Hardware, Arlington, and Dixie Sporting Goods, Alexandria.



Warden Francis Fenderson, Petersburg, 238 subscriptions, 745 points—tackle box from Gearhart's, Falls Church.

Warden Malcolm Booker, Buckingham County, 181 subscriptions, 731 points—deer knife from Horace Brown, Falls Church.

Warden B. L. Adams, Charles City County, 149 subscriptions, 689 points—ice chest and tackle box from Joseph F. Thomas Company, Arlington.

Warden Gene Altman, Fauquier County, 219 subscriptions, 577 points

—rod from Ed's Boat and Tackle, Fairfax.

Warden Nelson Phelps, Nottoway County, 189 subscriptions, 537 points—boat seat from McQuinn's Sporting Goods, Arlington.

Warden Julian Hill, Richmond, 113 subscriptions, 507 points—ice bucket from Ken McPhail, Inc., Vienna.

Warden R. S. Crigler, Madison County, 221 subscriptions, 470 points—flashlight from Franconia Hardware, Arlington.

Warden Joe Bellamy, Chesterfield County, 125 subscriptions, 360 points—badminton set from A. M. Clotzman, Alexandria.

The shotgun was purchased from funds donated by the Virginia Division of the Izaak Walton League; Blue Ridge Fish and Game Association; Spruance Anglers Association; Ted Clarke's, Hopewell; Sportsman Shop, Richmond; Sport Center, Richmond; and Atkinson and Ford, Richmond.

Sportsmen Will Be Sportsmen

Commissioner J. Cargill Johnson of Warwick City reports that on a cold, dark night in February, 1958, Clarence Underwood of Isle of Wight County, Virginia, was awakened by the barking of dogs and the squealing of hogs and pigs. In a short time fire had destroyed a new building, about 32 feet by 80 feet, that he had just completed and stocked with sows and pigs. Mr. Underwood, a hog raiser, farmer and a sportsman, was hit hard, with a loss of about \$3,000, but his greatest loss was the loss of faith and heart.

Word got around to some friends who had hunted with him—Thomas Jones, Ashton Golden, Bill Thomas,

Jimmie Newton, Alex Morgan and Barton Barker—and to some who had heard only that he was a gentleman and the sportsman holding the trophy for the largest deer head east of the Blue Ridge.

These friends and sportsmen took a week-end off from their jobs and homes in and around Warwick, Virginia, to have a barn-raising. The barn was completed and now Mr. Underwood is back in business with renewed faith and, best of all, a greater love for his fellow sportsmen.

Commission Obtains Public Access Site on Shenandoah River



Page News & Courier Photo

Thomas G. Herring of Dayton, veteran member of the Commission of Game and Inland Fisheries, recently accepted a deed on behalf of the Commonwealth conveying three acres of land in Page County on the west side of the Shenandoah River to the Commission. The area will be developed for public use, to provide free access for sportsmen to the river for fishing and launching boats. Present for the transfer, in the office of J. Everett Will, attorney, were, from left, standing, Mr. Westenberger, president of the Valois Corporation which owned the property; Elmer V. Richards of Timberville, Virginia, Commission game biologist; Earl D. Schnell, secretary of the Valois Corporation; H. W. Keller, Page County game warden; and, seated, Mr. Will and Mr. Herring.

In receiving the land on behalf of the state, Mr. Herring expressed his indebtedness to local citizens for their cooperation and interest in making it possible.

The tract is located on county road 684 about seven miles north of Bixler's Ferry. The area, which will be

developed as part of the Commission of Game and Inland Fisheries' program of obtaining rights-of-way and access routes to forest areas and rivers for the use of sportsmen in Virginia, is the first of a series of such areas planned for the Shenandoah River.

Rogers Appointed Salt Water Sport Fishing Promotion Consultant

Appointment of Claude Rogers of Virginia Beach, widely known Virginia fisherman, as consultant on saltwater sport fishing promotion for the Virginia Department of Conservation and Economic Development, has been announced by Raymond V. Long, Department director.

Rogers has established an office at 20th and Pacific Avenue, Virginia Beach, which will also serve as headquarters for the Salt Water Sport Fishing Association of Virginia and the Virginia Salt Water Fishing Tournament. He is executive secretary of the Association and director of the tournament, sponsored by the Association.

An expert in both fresh and saltwater fishing, Rogers, who is 40, has been fishing since the age of eight years. He holds the Virginia record for striped bass, a 44-pound, 10-ounce fish caught in 1957 off a Virginia Beach pier, and was the first fisherman to take a tarpon from Virginia waters when he landed a 90-pounder from South Bay on Virginia's eastern shore in July 1955. Prior to accepting his new position, he was for a number of years plant records supervisor for the Virginia Electric and Power Company's Norfolk area.

Small Woodland Discussion Meeting is Scheduled

In an effort to obtain ideas on how to meet anticipated future wood demands through more efficient management of small woodland areas, the U. S. Forest Service has scheduled a discussion meeting open to owners of farm wood lots and others interested in stimulating timber production, markets, harvesting methods, fire control and reforestation in the Kentucky-Virginia-West Virginia region for September 23 at Charlottesville.

Back Bay Facilities Improving

Both fresh and saltwater sportsmen should look into the new facilities at Back Bay. Named Back Bay Marina, facilities include tackle, bait, snack bar, boat ramps and docks. It can be reached by following State Route 603 to the entrance of Bay Creek. Since Back Bay is one of the better bass areas in Virginia, this should be a welcome addition to existing facilities.

Available to the public without charge is a Commission circular listing other sportsmen facilities of the area.



In the "Good Old Days": Sheriff Catches 200 Trout

Highland County game warden C. H. Corbett sends us this recent item from the Highland Recorder of Monterey, Virginia: "50 Years Ago—Sheriff Arbogast and James Leggett went fishing on Laurel Fork last week and brought home over 200 of the speckled beauties."

Waltonians Out to Improve Hunting Conduct

The Izaak Walton League of America, its Chapters and State Divisions, with the cooperation of the National Sporting Goods Association, is inaugurating Hunt America Time. This annual outdoor education program is aimed at the improvement of hunter conduct afield. It will call public attention to the threats to future hunting posed by unsportsmanlike conduct. It will also ask the nation's hunters to sign and observe the Hunt America Pledge to (1) be law abiding, (2) respect the rights and property of others, and (3) be careful with fire and firearms.

LETTERS AND COMMENTS

Letters of general interest are welcomed. They should be signed, but initials will be used on request.

Pike or Pickerel?

SOMEBODY goofed in your July 1958 issue of VIRGINIA WILDLIFE in the Drumming Log section. Under the title "Taxidermy in Sight!" A. Leroy Meares, Jr. describes a fish he and a friend caught from the Chickahominy River as a pike, but in the picture caption the fish is called a pickerel. Now which is it, pike or pickerel?

Miss Carolyn Deck
Pearisburg, Virginia

- *A chain pickerel, often called a pike.*

Promoting Travel to Virginia

I wish to extend my congratulations for a job well done in both writing and illustrating your magazine. Both my family and myself look forward with pleasure to the arrival of the book and I might add that one of the members of the family who is an ardent fisherman has been prompted by some of the articles to travel to your area and try his luck.

Bruce B. Nidd
Pomona, New York

Instead of Christmas Cards

LAST year I sent subscriptions to VIRGINIA WILDLIFE to some of my friends and relatives instead of Christmas cards. It costs only a few pennies more than a good card. I may have started a chain reaction, I hope. Good conservation reading is in all too few homes today.

Jim Anderson
Manchester, Massachusetts

Back Issues Are Available

I recently subscribed to your monthly magazine, VIRGINIA WILDLIFE, and enjoy it very much. I am wondering if any back issues of the magazines are available at this time.

A/2c Jim Young
Malmstrom AFB, Montana

- *Miscellaneous back issues of VIRGINIA WILDLIFE are available at five cents per copy; bound volumes for 1957 are \$3.50 each.*

Saved From the Flames

I have greatly appreciated your magazine during the past five years, and while I will burn back issues of others, VIRGINIA WILDLIFE I will always keep.

O. David Shank
Criglersville, Virginia

Wrecked Ships Wanted

CAN you advise me of the location of all the wrecked ships in Virginia and North Carolina like the one on the July cover of VIRGINIA WILDLIFE which may be explored from the beach or by diving methods?

P. A. Klinkert
Vienna, Virginia

- *No, but the National Park Service did identify the ship on the July cover as being on Chicamacomico Island, North Carolina.*

Sound Conservation Education

YOUR magazine is just tops: wonderful photographs, superb covers, each issue packed with information—and all along the way the most sound conservation education presented in the excellent combination of being interesting, informative and timely. Thanks . . . for something of which every Virginian can be proud.

Mrs. James F. Birchfield
Auburn, Virginia

Gives Looked-for Information

VIRGINIA WILDLIFE is one of the best all-around sporting magazines I have ever read. It really gives us sportsmen the information we are looking for. Keep up the good work.

Richard Ted Blankenship
Emporia, Virginia

"Removed—Left No Address"

PLEASE advise me as to why I am not receiving my WILDLIFE magazine. I renewed it for three years and have not received it since March. I am behind April, May, June and July. Please look into this and see that I receive it. Let me hear from you.

Wesley Simes
Petersburg, Virginia

- *Dozens of torn-off address stickers of VIRGINIA WILDLIFE magazine are returned to the circulation department each month because magazines, being second-class matter, cannot be forwarded. The magazines themselves are destroyed. If the subscriber has left his new address with the Post Office, we may be given it by the Post Office. A subscriber who informs neither the Post Office nor the magazine publisher of his new address cannot expect to continue to receive it until he lets us know his new address. Mr. Simes, your copy of the March issue of VIRGINIA WILDLIFE was returned by the Post Office so we have been holding your subscription until we heard from you.*

On your renewal you failed to mark your change of address. We are sending you the back issues which you missed and future issues should be received by the tenth of the month.

Hawks and Habitat

LET'S see more articles like the one on hawks ("Falcon in the Sky," Feb. 1958) and lots on habitat improvement.

Ed Bierly
Arlington, Virginia

- *Dr. Murray, author of "Falcon in the Sky," is writing our new "Bird of the Month" feature; "Prepare NOW for Wildlife" on page 8 fills your request for a habitat improvement article.*

Providing a Good Opportunity

I have been receiving VIRGINIA WILDLIFE for some months, and have enjoyed it very much. I have had an opportunity to see several similar publications from other states, and have found yours far superior in its whole approach and its diversified coverage of the conservation of our natural resources. I feel you truly appreciate the many other forms of outdoor recreation and appreciation, as well as hunting and fishing. VIRGINIA WILDLIFE is certainly providing a good opportunity for people to realize their responsibility in preserving our natural resources in all their many forms.

Charles H. Eastman
Columbia, South Carolina

Waterfowl Guide Available

IF you still have copies of *Sportsman's Guide to Wild Ducks*, I would like to purchase as many as 20 copies.

Charles W. Norton, Jr., Capt. USAF
Columbia, South Carolina

- *The Sportsman's Guide is out of print; copies of the Atlantic Waterfowl Flyway Council's Waterfowl Identification Guide are free on request, however.*

Should Interest All Virginia Families

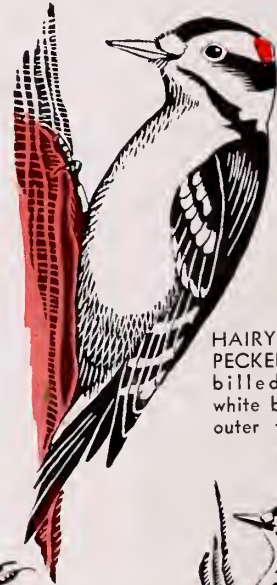
OUR first issue of VIRGINIA WILDLIFE just arrived and we think it is one of the most beautiful and worthwhile magazines we subscribe to. We feel all Virginia families will be interested in it when they see one of the issues.

Mrs. Donald W. Larson
Richmond, Virginia

VIRGINIA WOODPECKERS

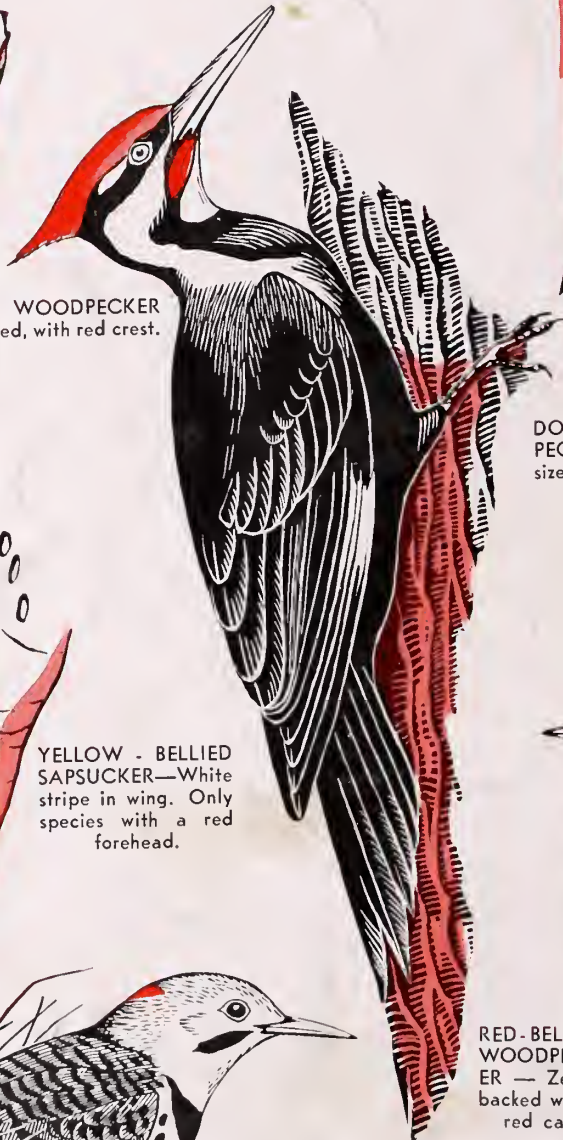


RED-HEADED WOODPECKER—The only species with the entire head red. White wing patches in flight.



HAIRY WOODPECKER—Large-billed, with a white back. Plain outer tail feathers.

PILEATED WOODPECKER
—Crow-sized, with red crest.



DOWNY WOODPECKER — Small size, barred outer tail feathers.



YELLOW-BELLIED SAPSUCKER—White stripe in wing. Only species with a red forehead.



FLICKER—Brown-backed, with a white rump. Yellow under wings and tail.

RED-BELLIED WOODPECKER — Zebra-backed with a red cap.



RED-COCKADED WOODPECKER not shown.

J.W. TAYLOR